ProCurve Switch 2610 Series

The ProCurve Switch 2610 Series consists of five switches—the 2610-24 and 2610-48 provide 24 and 48 ports of 10/100 connectivity. The 2610-24 is fanless, ensuring quiet operation and making it ideal for deployment in open spaces. The 2610-24/12PWR, 2610-24-PWR, and 2610-48-PWR are IEEE 802.3af-compliant for Power over Ethernet(PoE) and provide up to 15.4 W for 12, 24, and 48 ports. The 2610-24/12PWR has 24 10/100 ports and provides 12 ports of PoE. All switches include two 10/100/1000Base-T ports and two mini-GBIC slots for Gigabit uplink connectivity. An optional redundant external power supply is also available to provide redundancy in the event of a power supply failure. With static routing, robust security and management features, free lifetime warranty, and free software updates, the 2610 series is a cost-effective solution for customers who are building converged enterprise edge networks.

ProCurve Switch 2610-48
(J9088A)

ProCurve Switch 2610-24
(J9085A)

ProCurve Switch
2610-24-PWR (J9087A)

ProCurve Switch
2610-48-PWR (J9089A)

ProCurve Switch
2610-24/12PWR (J9086A)

ProCurve Switch 2610 Series

Features and benefits

Connectivity

• **IEEE 802.3af Power over Ethernet:** provides up to 15.4 W per port to IEEE 802.3af compliant PoE powered devices such as IP phones, wireless access points, and security cameras

• **Pre-standard PoE support:** detects and provides power to pre-standard PoE devices; see list of supported devices in the product FAQ at www.procurve.com

• **Gigabit Uplink Connectivity:** two 10/100/1000BASE-T ports and two mini-GBIC ports for Connectivity such as Gigabit (SX, LX, LH, 1000BaseT) and 100Base-FX

• **ProCurve Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all 10/100 ports

• **Jumbo packet support:** supports up to 9,216 byte frame size to improve performance of large data transfers

Resiliency and high availability

• **IEEE 802.3ad Link Aggregation Protocol (LACP) and ProCurve trunking:** support up to 24 trunks, each with up to 8 links (ports) per trunk

• **IEEE 802.1s Multiple Spanning Tree:** provides high link availability in multiple VLAN environments by allowing multiple spanning trees; provides legacy support for IEEE 802.1d and IEEE 802.1w

• **Optional redundant power supply:** provides uninterrupted power (provided by ProCurve 600 RPS/EPS)

Layer 2 switching

• **VLAN support and tagging:** supports the IEEE 802.1Q (4,096 VLAN IDs) and 256 VLANs simultaneously

• **GARP VLAN Registration Protocol:** allows automatic learning and dynamic assignment of VLANs

Layer 3 routing

• **Basic IP routing:** enables automatic routing to the connected VLANs and up to 16 static routes--including one default route--in IP networks

Security

• **Multiple user authentication methods:**
- **IEEE 802.1X:** industry-standard way of user authentication using an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server
- **Web-based authentication:** similar to IEEE 802.1X, provides a browser-based environment to authenticate clients that do not support the IEEE 802.1X supplicant
- **MAC-based authentication:** client is authenticated with the RADIUS server based on the client's MAC address

• **Authentication flexibility:**
- **Multiple IEEE 802.1X users per port:** provides authentication of up to 8 IEEE 802.1X users per port; prevents user "piggybacking" on another user's IEEE 802.1X authentication
- **Concurrent IEEE 802.1X and Web or MAC authentication schemes per port:** switch port will accept any of IEEE 802.1X and either Web or MAC authentications

• **ICMP throttling:** defeats ICMP denial-of-service attacks by throttling of ICMP traffic on the switch

• **Access control lists (ACLs):** provide IP Layer 3 filtering based on source/destination IP address/subnet and source/destination TCP/UDP port number

• **Identity-driven ACL:** enables implementation of a highly granular and flexible access security policy specific to each authenticated network user

ProCurve Switch 2610 Series

• **Port security:** allows access only to specified MAC addresses, which can be learned or specified by the administrator

• **MAC address lockout:** prevents configured particular MAC addresses from connecting to the network

• **Source-port filtering:** allows only specified ports to communicate with each other

• **TACACS+:** eases switch management security administration by using a password authentication server

• **Secure Shell (SSHv2):** encrypts all transmitted data for secure, remote command-line interface (CLI) access over IP networks

• **Port monitoring for network threats:** Provides sampled port traffic using sFlow technology to the ProCurve Network Immunity Manager application for Network Behavior Anomaly Detection (NBAD) analysis to detect threats and mitigate threats at the port where the threat originated

• **Secure Sockets Layer (SSL):** encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch

• **Secure FTP:** allows secure file transfer to/from the switch; protects against unwanted file downloads or unauthorized copying of switch configuration file

• **Switch management logon security:** can require either RADIUS or TACACS+ authentication for secure switch CLI logon

• **Dynamic IP lockdown:** works with DHCP protection to block traffic from unauthorized host, preventing IP source address spoofing

• **Dynamic ARP protection:** blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data

• **DHCP protection:** blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks

• **BPDU port protection:** blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks

• **STP Root Guard:** protects root bridge from malicious attack or configuration mistakes

Convergence

• **IEEE 802.1AB Link Layer Discovery Protocol (LLDP):** automated device discovery protocol for easy mapping by network management applications

• **LLDP-MED (Media Endpoint Discovery):** a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones

• **IP multicast snooping and data-driven IGMP:** automatically prevents flooding of IP multicast traffic

Quality of Service (QoS)

• **Class of Service (CoS):** sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), L3 protocol, TCP/UDP port number, source port, and DiffServ

• **Layer 4 prioritization:** enables prioritization based on TCP/UDP port numbers

• **Traffic prioritization (IEEE 802.1p):** allows real-time traffic classification into 8 priority levels mapped to 4 queues

Manageability

• **RMON, XRMON, and sFlow:** provide advanced monitoring and reporting capabilities for statistics, history, alarms, and events

• **Friendly port names:** allow assignment of descriptive names to ports

• **Uni-Directional Link Detection (UDLD):** monitors a link between two switches and blocks

the ports on both ends of the link if the link goes down at any point between the two devices

• **Command authorization::** leverages RADIUS to link a custom list of CLI commands to individual network administrator's login; also provides an audit trail

• **Stacking capability:** single IP address management for a virtual stack of up to 16 switches, including the ProCurve 2500 series, 2510 series, 2600 series, 2610 series, 2810 series, 2900 series, 3400cl series, 3500l series, 4200vl series, 6108, 6200yl-24G-mGBIC, and 6400cl series

• **Find-Fix-and-Inform:** finds and fixes common network problems automatically, then informs administrator

• **Troubleshooting:** ingress/egress port monitoring enables network problem-solving

• **Multiple configuration files:** allow multiple config files to be stored to flash image

• **Dual flash images:** provides independent primary and secondary operating system files for backup while upgrading

• **Software updates:** free downloads from the Web

Monitor and diagnostics

• **Port mirroring:** enables traffic on a port to be simultaneously sent to a network analyzer for monitoring

Industry-leading warranty

• **Lifetime warranty:** for as long as you own the product, with next-business-day advance replacement (available in most countries)

ProCurve Switch 2610 Series

	ProCurve Switch 2610-48 (J9088A)	ProCurve Switch 2610-24 (J9085A)	ProCurve Switch 2610-24-PWR (J9087A)

Specifications

Ports

	48 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Media Type: Auto-MDIX; Duplex: half or full	24 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Media Type: Auto-MDIX; Duplex: half or full	24 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Media Type: Auto-MDIX; Duplex: half or full
	1 RJ-45 serial console port	1 RJ-45 serial console port	1 RJ-45 serial console port
	2 auto-sensing 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only	2 auto-sensing 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only	2 auto-sensing 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only
	2 open mini-GBIC (SFP) slots	2 open mini-GBIC (SFP) slots	2 open mini-GBIC (SFP) slots

Physical characteristics

Dimensions	9.3(d) x 17.4(w) x 1.73(h) in. (23.62 x 44.2 x 4.39 cm) (1U height)	9.3(d) x 17.4(w) x 1.73(h) in. (23.62 x 44.2 x 4.39 cm) (1U height)	12.5(d) x 17.4(w) x 1.73(h) in. (31.75 x 44.2 x 4.39 cm) (1U height)
Weight	10.75 lb. (4.88 kg), Fully loaded	10.2 lb. (4.63 kg), Fully loaded	15.05 lb. (6.83 kg), Fully loaded

Memory and processor

Processor	MIPS @ 300 MHz, 16 MB flash, 128 MB SDRAM; packet buffer size: 2 MB	MIPS @ 300 MHz, 16 MB flash, 128 MB SDRAM; packet buffer size: 1 MB	MIPS @ 300 MHz, 16 MB flash, 128 MB SDRAM; packet buffer size: 1 MB

Mounting

	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only

Performance

100 Mb Latency	< 6.2 µs (LIFO)	< 4.1 µs (LIFO)	< 4.1 µs (LIFO)
1000 Mb Latency	< 4.4 µs (LIFO)	< 2.9 µs (LIFO)	< 2.9 µs (LIFO)
Throughput	up to 13.0 million pps	up to 9.5 million pps	up to 9.5 million pps
Routing/Switching capacity	17.6 Gbps	12.8 Gbps	12.8 Gbps
MAC address table size	8000 entries	8000 entries	8000 entries

Environment

Operating temperature	32ºF to 122ºF (0ºC to 50ºC)	32ºF to 122ºF (0ºC to 50ºC)	32ºF to 122ºF (0ºC to 50ºC)
Operating relative humidity	15% to 95% @ 104ºF (40ºC), non-condensing	15% to 95% @ 104ºF (40ºC), non-condensing	15% to 95% @ 104ºF (40ºC), non-condensing
Non-operating/Storage temperature	-40ºF to 158ºF (-40ºC to 70ºC)	-40ºF to 158ºF (-40ºC to 70ºC)	-40ºF to 158ºF (-40ºC to 70ºC)
Non-operating/Storage relative humidity	15% to 90% @ 149ºF (65ºC), non-condensing	15% to 90% @ 149ºF (65ºC), non-condensing	15% to 90% @ 149ºF (65ºC), non-condensing
Altitude	up to 10000 ft. (3 km)	up to 10000 ft. (3 km)	up to 10000 ft. (3 km)
Acoustic	Power: 45 dB, Pressure: 36.2 dB; DIN 45635T.19 per ISO 7779	Power: 0 dB, Pressure: 0 dB No Fan	Power: 64 dB, Pressure: 57 dB; DIN 45635T.19 per ISO 7779

ProCurve Switch 2610 Series

Electrical characteristics

Maximum heat dissipation	285 BTU/hr (300.67 kJ/hr)	142 BTU/hr (149.81 kJ/hr)	410 BTU/hr (432.55 kJ/hr), (Switch only BTU/hr - 410, combined switch + maxPoE devices at 15.4 W - 2281 BTU/hr)
Voltage	100-127 / 200-240 VAC	100-127 / 200-240 VAC	100-127 / 200-240 VAC
Current	1.3 / 0.8 A	0.8 / 0.4 A	7.0 / 3.5 A
Power consumption	66 W	41 W	77 W
Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Notes			Power Consumption - 77 W without PoE; 527 W with PoE

Safety

	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950

Emissions

	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A

Immunity

EN	EN 55024, CISPR 24	EN 55024, CISPR 24	EN 55024, CISPR 24
ESD	IEC 61000-4-2; 4 kV CD, 8 kV AD	IEC 61000-4-2; 4 kV CD, 8 kV AD	IEC 61000-4-2; 4 kV CD, 8 kV AD
Radiated	IEC 61000-4-3; 3V/m	IEC 61000-4-3; 3V/m	IEC 61000-4-3; 3V/m
EFT/Burst	IEC 61000-4-4; 1.0 kV(power line), 0.5kV (signal line)	IEC 61000-4-4; 1.0 kV(power line), 0.5kV (signal line)	IEC 61000-4-4; 1.0 kV(power line), 0.5kV (signal line)
Surge	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC
Conducted	IEC 61000-4-6; 3V	IEC 61000-4-6; 3V	IEC 61000-4-6; 3V
Power frequency magnetic field	IEC 61000-4-8; 1A/m,50 or 60 Hz	IEC 61000-4-8; 1A/m,50 or 60 Hz	IEC 61000-4-8; 1A/m,50 or 60 Hz
Voltage dips and interruptions	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
Harmonics	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2
Flicker	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3

Management

	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)

ProCurve Switch 2610 Series

Standards and Protocols

Device Management
HTML and telnet management

General Protocols
IEEE 802.1D MAC Bridges
IEEE 802.1p Priority
IEEE 802.1Q VLANs
IEEE 802.1v VLAN classification
by Protocol and Port
IEEE 802.1w Rapid
Reconfiguration of Spanning Tree
IEEE 802.3ad Link Aggregation
Control Protocol (LACP)
IEEE 802.3af Power over
Ethernet
IEEE 802.3x Flow Control
RFC 768 UDP
RFC 783 TFTP Protocol (revision
2)
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC 854 TELNET

RFC 951 BOOTP
RFC 1542 BOOTP Extensions
RFC 2030 Simple Network Time
Protocol (SNTP) v4
RFC 2131 DHCP
RFC 3046 DHCP Relay Agent
Information Option

IP Multicast
RFC 3376 IGMPv3

MIBs
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 2021 RMONv2 MIB
RFC 2096 IP Forwarding Table
MIB
RFC 2613 SMON MIB
RFC 2618 RADIUS Client MIB
RFC 2665 Ethernet-Like-MIB
RFC 2668 802.3 MAU MIB

RFC 2674 802.1p and IEEE
802.1Q Bridge MIB
RFC 2737 Entity MIB (Version 2)
RFC 2863 The Interfaces Group
MIB

Network Management
IEEE 802.1AB Link Layer
Discovery Protocol (LLDP)
RFC 3164 BSD syslog Protocol
RFC 3176 sFlow
ANSI/TIA-1057 LLDP Media
Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3

Security
IEEE 802.1X Port Based Network
Access Control
RFC 1492 TACACS+
Secure Sockets Layer (SSL)
SSHv1/SSHv2 Secure Shell

ProCurve Switch 2610 Series

ProCurve Switch 2610-48-PWR (J9089A)

ProCurve Switch 2610-24/12PWR (J9086A)

Specifications

Ports		
	48 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Media Type: Auto-MDIX; Duplex: half or full	24 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Media Type: Auto-MDIX; Duplex: half or full
	1 RJ-45 serial console port	1 RJ-45 serial console port
	2 auto-sensing 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only	2 auto-sensing 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only
	2 open mini-GBIC (SFP) slots	2 open mini-GBIC (SFP) slots
Physical characteristics		
Dimensions	13.5(d) x 17.4(w) x 1.73(h) in. (34.29 x 44.2 x 4.39 cm) (1U height)	9.3(d) x 17.4(w) x 1.73(h) in. (23.62 x 44.2 x 4.39 cm) (1U height)
Weight	16.7 lb. (7.58 kg), Fully loaded	7.5 lb. (3.4 kg)
Memory and processor		
Processor	MIPS @ 300 MHz, 16 MB flash, 128 MB SDRAM; packet buffer size: 2 MB	MIPS @ 300 MHz, 16 MB flash, 128 MB SDRAM; packet buffer size: 1 MB
Mounting		
	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only
Performance		
100 Mb Latency	< 6.2 µs (LIFO)	< 4.1 µs
1000 Mb Latency	< 4.4 µs (LIFO)	< 2.9 µs
Throughput	up to 13.0 million pps	up to 9.5 million pps
Routing/Switching capacity	17.6 Gbps	12.8 Gbps
MAC address table size	8000 entries	8000 entries
Environment		
Operating temperature	32ºF to 122ºF (0ºC to 50ºC)	32ºF to 122ºF (0ºC to 50ºC)
Operating relative humidity	15% to 95% @ 104ºF (40ºC), non-condensing	15% to 95% @ 104ºF (40ºC), non-condensing
Non-operating/Storage temperature	-40ºF to 158ºF (-40ºC to 70ºC)	-40ºF to 158ºF (-40ºC to 70ºC)
Non-operating/Storage relative humidity	15% to 90% @ 149ºF (65ºC), non-condensing	15% to 90% @ 149ºF (65ºC), non-condensing
Altitude	up to 10000 ft. (3 km)	up to 10000 ft. (3 km)
Acoustic	Power: 63.6 dB, Pressure: 56.6 dB; DIN 45635T.19 per ISO 7779	Power: 46 dB, Pressure: 38.4 dB; DIN 45635T.19 per ISO 7779
Electrical characteristics		
Maximum heat dissipation	410 BTU/hr (432.55 kJ/hr), (Switch only BTU/hr - 410, combined switch + maxPoE devices at 15.4 W - 2281 BTU/hr)	181 BTU/hr (190.96 kJ/hr), (Switch only BTU/hr - 181, combined switch + maxPoE devices at 15.4 W - 827 BTU/hr)
Voltage	100-127 / 200-240 VAC	100-127 / 200-240 VAC
Current	7.0 / 3.5 A	3.3 / 1.7 A

ProCurve Switch 2610 Series

Power consumption	96 W	62 W
Frequency	50 / 60 Hz	50 / 60 Hz
Notes	Power Consumption - 96 W without PoE; 590 W with PoE	Power Consumption - 62 W without PoE; 189 W with PoE

Safety

	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950

Emissions

	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A

Immunity

EN	EN 55024, CISPR 24	EN 55024, CISPR 24
ESD	IEC 61000-4-2; 4 kV CD, 8 kV AD	IEC 61000-4-2; 4 kV CD, 8 kV AD
Radiated	IEC 61000-4-3; 3V/m	IEC 61000-4-3; 3V/m
EFT/Burst	IEC 61000-4-4; 1.0 kV(power line), 0.5kV (signal line)	IEC 61000-4-4; 1.0 kV(power line), 0.5kV (signal line)
Surge	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC
Conducted	IEC 61000-4-6; 3V	IEC 61000-4-6; 3V
Power frequency magnetic field	IEC 61000-4-8; 1A/m,50 or 60 Hz	IEC 61000-4-8; 1A/m,50 or 60 Hz
Voltage dips and interruptions	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
Harmonics	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2
Flicker	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3

Management

	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)

ProCurve Switch 2610 Series

Standards and Protocols

Device Management
HTML and telnet management

General Protocols
IEEE 802.1D MAC Bridges
IEEE 802.1p Priority
IEEE 802.1Q VLANs
IEEE 802.1v VLAN classification by Protocol and Port
IEEE 802.1w Rapid Reconfiguration of Spanning Tree
IEEE 802.3ad Link Aggregation Control Protocol (LACP)
IEEE 802.3af Power over Ethernet
IEEE 802.3x Flow Control
RFC 768 UDP
RFC 783 TFTP Protocol (revision 2)
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC 854 TELNET

RFC 951 BOOTP
RFC 1542 BOOTP Extensions
RFC 2030 Simple Network Time Protocol (SNTP) v4
RFC 2131 DHCP
RFC 3046 DHCP Relay Agent Information Option

IP Multicast
RFC 3376 IGMPv3

MIBs
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 2021 RMONv2 MIB
RFC 2096 IP Forwarding Table MIB
RFC 2613 SMON MIB
RFC 2618 RADIUS Client MIB
RFC 2665 Ethernet-Like-MIB
RFC 2668 802.3 MAU MIB

RFC 2674 802.1p and IEEE 802.1Q Bridge MIB
RFC 2737 Entity MIB (Version 2)
RFC 2863 The Interfaces Group MIB

Network Management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 3164 BSD syslog Protocol
RFC 3176 sFlow
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3

Security
IEEE 802.1X Port Based Network Access Control
RFC 1492 TACACS+
Secure Sockets Layer (SSL)
SSHv1/SSHv2 Secure Shell

ProCurve Switch 2610 Series

Accessories

ProCurve Gigabit-SX-LC Mini-GBIC (J4858C)
A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550 m on multimode fiber.

Ports
1 LC 1000Base-SX port (IEEE 802.3z Type 1000Base-SX)
Duplex: full only

Physical characteristics
Dimensions: 2.24(d) x 0.54(w) x 0.486(h) in. (5.69 x 1.37 x 1.23 cm)
Weight: 0.04 lb. (0.02 kg)

Cabling

Type:
• 62.5/125 µm or 50/125 µm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively

Maximum distance:
• 2-220 m (62.5 µm core diameter, 160 MHz*km bandwidth)• 2-275 m (62.5 µm core diameter, 200 MHz*km bandwidth)• 2-500 m (50 µm core diameter, 400 MHz*km bandwidth)• 2-550 m (50 µm core diameter, 500 MHz*km bandwidth)

ProCurve Gigabit-LX-LC Mini-GBIC (J4859C)
A small form-factor pluggable (SFP) Gigabit LX transceiver that provides a full-duplex Gigabit solution up to 10 km (singlemode) or 550 m (multimode).

Ports
1 LC 1000Base-LX port (IEEE 802.3z Type 1000Base-LX)
Duplex: full only

Physical characteristics
Dimensions: 2.24(d) x 0.54(w) x 0.486(h) in. (5.69 x 1.37 x 1.23 cm)
Weight: 0.04 lb. (0.02 kg)

Cabling

Type:
• Either single mode or multimode
• 62.5/125 µm or 50/125 µm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively
• Low metal content, single-mode fiber-optic, complying with ITU-T G.652

and ISO/IEC 793-2 Type B1

Maximum distance:
• 2-550 m (multimode 62.5 µm core diameter, 500 MHz*km bandwidth)• 2-550 m (multimode 50 µm core diameter, 400 MHz*km bandwidth)• 2-550 m (multimode 50 µm core diameter, 500 MHz*km bandwidth)• 2-10,000 m (singlemode fiber)

Notes
A mode conditioning patch cord may be needed in some multimode fiber installations.

ProCurve Gigabit-LH-LC Mini-GBIC (J4860C)
A small form-factor pluggable (SFP) Gigabit LH transceiver that provides a full-duplex Gigabit solution up to 70 km on singlemode fiber.

Ports
1 LC 1000Base-LH port (no IEEE standard exists for 1550 nm optics)
Duplex: full only

Physical characteristics
Dimensions: 2.17(d) x 0.60(w) x 0.46(h) in. (5.5 x 1.53 x 1.18 cm)
Weight: 0.04 lb. (0.02 kg)

Cabling

Type:
• Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1

Maximum distance:
• 10-70,000 m (singlemode fiber)

Notes
For distances less than 20 km, a 10 dB attenuator must be used.

For distances between 20 km and 40 km, a 5 dB attenuator must be used.

Attenuators can be purchased from most cable vendors.

ProCurve Switch 2610 Series

ProCurve Gigabit 1000Base-T Mini-GBIC (J8177B)
A small form-factor pluggable (SFP) Gigabit copper transceiver that provides a full-duplex Gigabit solution up to 100 m on Category 5 or better cable.

Ports
1 RJ-45 1000Base-T port (IEEE 802.3ab Type 1000Base-T)
Duplex: full only

Physical characteristics
Dimensions: 2.71(d) x 0.54(w) x 0.55(h) in. (6.88 x 1.37 x 1.4 cm)
Weight: 0.06 lb. (0.03 kg)

Cabling

Type:
• 1000Base-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000Base-T

Maximum distance:

• 100 m

Notes
When used in the ProCurve Switch gl 20-Port 10/100/1000 Module (J4908A), the J8177B mini-GBIC can be installed in either the upper or lower mini-GBIC port, but will block access to the other port.

See the document titled "Support for the J8177B 1000Base-T Mini-GBIC," on the "ProCurve Mini-GBICs and SFPs" Manuals Web page, for supported platforms and minimum software requirements to support this product.

The J8177B gigabit copper mini-GBIC is not supported on dual-personality ports.

ProCurve 100-FX SFP-LC Transceiver (J9054B)
A small form-factor pluggable (SFP) 100Base-FX transceiver that provides 100 Mbps full-duplex connectivity up to 2 km on multimode fiber.

Ports
1 LC 100Base-FX port (IEEE 802.3u Type 100Base-FX)
Duplex: half or full

Physical characteristics
Dimensions: 2.7(d) x 0.54(w) x 0.48(h) in. (6.86 x 1.38 x 1.22 cm)
Weight: 0.06 lb. (0.03 kg)

Environment
Operating temperature: 32ºF to 158ºF (0ºC to 70ºC)
Operating relative humidity: 5% to 95%
Non-operating/Storage temperature: -40ºF to 185ºF (-40ºC to 85ºC)
Non-operating/Storage relative humidity: 5% to 85%
Altitude: up to 10000 ft. (3 km)

Cabling

Type:
• 62.5/125 µm or 50/125 µm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively

Maximum distance:
• 2 km (full duplex) or 412 m (half duplex)

Notes
See the document titled "Support for the J9054B 100-FX SFP-LC Transceiver," located on the "ProCurve Mini-GBICs and SFPs" Manuals Web page, for supported platforms and minimum software requirements to support this product.

ProCurve Switch 2610 Series

ProCurve 600 Redundant External Power Supply (J8168A)
The ProCurve 600 Redundant and External Power Supply (RPS/EPS) has 6 RPS ports and 2 EPS ports and supplies backup and Power over Ethernet power.

Ports
6 redundant power supply ports
Restrictions: Each port can provide redundant +12 V power to a connected switch; only one port can provide power at a given time
2 external power supply ports
Restrictions: Provides +50 VDC external PoE to up to two switch devices; provides max. of 408 W full power to one device, and half power (204 W each) if connected to two devices

Physical characteristics
Dimensions: 12.83(d) x 17.44(w) x 1.73(h) in. (32.59 x 44.3 x 4.39 cm) (1U height)
Weight: 11.78 lb. (5.34 kg), Fully loaded

Mounting
1U rack-mountable and wall-mountable enclosure using standard mounting hardware

Environment
Operating temperature: 32ºF to 131ºF (0ºC to 55ºC)
Operating relative humidity: 15% to 95% @ 104ºF (40ºC), non-condensing
Non-operating/Storage temperature: -40ºF to 158ºF (-40ºC to 70ºC)
Non-operating/Storage relative humidity: 15% to 95% @ 149ºF (65ºC), non-condensing
Altitude: up to 15000 ft. (4.6 km)
Acoustic: Noise emission LwA=59.2 dB at virtual workspace, according to DIN 45635 T.19

Electrical characteristics
Description: The unit automatically adjusts to any voltage between 100-240 V and either 50 or 60 Hz
Voltage: 100-240 VAC
Current: 9 / 5 A
Power consumption: 800 W

RPS power: 180 W
PoE power: 408 W
Frequency: 50 / 60 Hz

Safety
CSA 22.2 No. 60950
EN 60950/IEC 60950
UL 60950

Emissions
FCC Class A
VCCI Class A
EN 55022/CISPR 22 Class A

Immunity
EN: EN 55024, CISPR 24
ESD: IEC 61000-4-2; 4 kV CD, 8 kV AD
Radiated: IEC 61000-4-3; 3 V/m
EFT/Burst: IEC 61000-4-4; 1.0 kV (power line), 0.05 kV (signal line)
Surge: IEC 61000-4-5; 1 kV/2 kV AC
Conducted: IEC 61000-4-6; 3 V
Power frequency magnetic field: IEC 61000-4-8; 1 A/m, 50 or 60 Hz
Voltage dips and interruptions: IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
Harmonics: EN 61000-3-2, IEC 61000-3-2
Flicker: EN 61000-3-3, IEC 61000-3-3

Management
Provides information via port interfaces of attached devices

Notes
Supported devices
• ProCurve Switch 2600-PWR series, ProCurve Switch 2610 series, ProCurve Switch 2610-PWR series, ProCurve Switch 2800 series, ProCurve Switch 2810 series, ProCurve Switch 5300xl series, ProCurve Switch 3400cl series, ProCurve Switch 6400cl series, ProCurve Secure Router 7000dl series

ProCurve Switch 2610 Series

ProCurve 610 External Power Supply (J8169A)
The ProCurve 610 External Power Supply (EPS) has 4 EPS ports and provides power to connected Switch xl 10/100-TX PoE modules.

Ports
4 external power supply ports
Restrictions: Provides +50 VDC external PoE power to up to four switch devices; each pair of EPS ports provides max. of 408 W full power to one device, and half power (204 W each) if connected to two devices; total 816 W of power

Physical characteristics
Dimensions: 19.02(d) x 17.3(w) x 1.73(h) in. (48.31 x 43.94 x 4.39 cm) (1U height)
Weight: 16.44 lb. (7.46 kg), Fully loaded

Mounting
1U rack-mountable and wall-mountable enclosure using standard mounting hardware

Environment
Operating temperature: 32ºF to 122ºF (0ºC to 50ºC)
Operating relative humidity: 15% to 95% @ 104ºF (40ºC), non-condensing
Non-operating/Storage temperature: -40ºF to 158ºF (-40ºC to 70ºC)
Non-operating/Storage relative humidity: 15% to 95% @ 149ºF (65ºC), non-condensing
Altitude: up to 15000 ft. (4.6 km)
Acoustic: Noise emission LwA=58 dB at virtual workspace, according to DIN 45635 T.19

Electrical characteristics
Description: The unit automatically adjusts to any voltage between 110-240 V and either 50 or 60 Hz
Voltage: 110-240 VAC
Current: 11 / 6 A
Power consumption: 1000 W
PoE power: 816 W

Frequency: 50 / 60 Hz
Notes: For Japan, the unit only operates at 200 V, 50 Hz, and 6 A.

Safety
CSA 22.2 No. 60950
EN 60950/IEC 60950
UL 60950

Emissions
FCC Class A
VCCI Class A
EN 55022/CISPR 22 Class A

Immunity
EN: EN 55024, CISPR 24
ESD: IEC 61000-4-2; 4 kV CD, 8 kV AD
Radiated: IEC 61000-4-3; 3 V/m
EFT/Burst: IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
Surge: IEC 61000-4-5; 1 kV/2 kV AC
Conducted: IEC 61000-4-6; 3 V
Power frequency magnetic field: IEC 61000-4-8; 1 A/m, 50 or 60 Hz
Voltage dips and interruptions: IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
Harmonics: EN 61000-3-2, IEC 61000-3-2
Flicker: EN 61000-3-3, IEC 61000-3-3

Management
Unmanaged power supply; provides information via LEDs or through port interfaces of attached devices

Notes
Supported devices: ProCurve Switch 2600-PWR series, ProCurve Switch 2610-PWR series, ProCurve Switch 5300xl series

ProCurve Switch 2610 Series

ProCurve Manager 2.3 (–)
Windows Server-based network management for
ProCurve LAN products

System requirements

For networks having 50 to 250 managed
devices, ProCurve recommends the
following:
Minimum system hardware
2.0 GHz Intel Pentium 4 or equivalent
processor
2 GB RAM memory
10 GB storage
1000 MB NIC
for PCM+ as a standalone application,
assuming a dedicated server
Recommended system hardware
3.0 GHz Intel Pentium 4 or equivalent
processor
3 GB RAM memory
40 GB storage
1000 MB NIC
for PCM+ assuming a dedicated server,
and including ProCurve Identity Driven
Manager, Mobility Manager, and Network
Immunity Manager on the same server
Recommended software
Microsoft Windows 2003 Server
Windows XP SP2
Windows XP Professional SP2

For networks having 250 to 2,000
managed devices, ProCurve recommends
the following:
Minimum system hardware
3.0 GHz Intel Pentium 4 or equivalent
processor
3 GB RAM memory
40 GB storage
1000 MB NIC
for PCM+ as a standalone application,
assuming a dedicated server

Recommended system hardware
Intel Xeon or equivalent processor
4 GB RAM memory
80 GB storage
1000 MB NIC
for PCM+ assuming a dedicated server,
and including ProCurve Identity Driven
Manager, Mobility Manager, and Network
Immunity Manager on the same server
Recommended software
Microsoft Windows 2003 Server
Windows XP SP2
Windows XP Professional SP2

Browsers
Microsoft Internet Explorer version 5.0 or
later

Supported platforms
HP OpenView Network Node Manager
version 6.41 or 7.01 or 7.5 (optional)

Additional requirements
NOTE: ProCurve Network Immunity
Manager when loaded on PCM+ 2.3 can
sample up to 500 managed ports using
sFlow or XRMON.

Notes
Unlimited license means that ProCurve
does not impose a limit on the number of
devices attached to the network as a
condition of the license. Some
degradation in performance may be
expected the greater the number of
devices attached to the network.

Specifications subject to change.

**ProCurve Network Immunity Manager 1.0
50-device license (J9060A)**
ProCurve Network Immunity Manager is a plug-in
module for ProCurve Manager Plus 2.2 that provides a
rich toolset to manage internal network threat detection
and response in a wired and wireless network
environment.

**ProCurve Network Immunity Manager 1.0
+100-device license (J9061A)**
ProCurve Network Immunity Manager is a plug-in
module for ProCurve Manager Plus 2.2 that provides a
rich toolset to manage internal network threat detection
and response in a wired and wireless network
environment.

**ProCurve Network Immunity Manager 1.0
unlimited-device license (J9062A)**
ProCurve Network Immunity Manager is a plug-in
module for ProCurve Manager Plus 2.2 that provides a
rich toolset to manage internal network threat detection
and response in a wired and wireless network
environment.

6/3/2008
To learn more, visit www.procurve.com
Information is subject to change without notice